

#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, | HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name:

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

### CONTROLLED ENVIRONMENT AGRICULTURE BIOREACTOR FOR HETEROLOGOUS PROTEIN PRODUCTION

	(Attorney Docket No. 059440-0138)		
the specification of	which (check one)		
	is attached hereto.		
_ <b>x</b> .	was filed on July 24, 2001 as United States Application Number or PCT International Application Number 09/910,958 and was amended on (if applicable).		

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/220,224	07/24/2000

I HEREBY CLAIM the benefit under Title 35, United States Code, §120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number
***************************************			

I HEREBY APPOINT **Stephen R. May, Reg. No. 29,255** of the Battelle Corporation, and the following registered attorneys and agents of the law firm of FOLEY & LARDNER to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith:

STEPHEN A. BENT	Reg		29,768
DAVID A. BLUMENTHAL	Reg	No	26,257
BETH A. BURROUS	Reg	No	35,087
ALAN I. CANTOR	Reg	Νo	28,163
WILLIAM T. ELLIS	Reg	Νo	26,874

JOHN J. FELDHAUS	Reg. No.	28,822
MICHAEL D. KAMINSKI	Reg. No.	32,904
LYLE K. KIMMS	Reg No	34,079
KENNETH E. KROSIN	Reg No	25,735
JOHNNY A. KUMAR	Reg No	34,649
JACK LAHR	Reg No	19,621
GLENN LAW	Reg No.	34,371
PETER G. MACK	Reg No	26,001
STEPHEN B. MAEBIUS	Reg No	35,264
BRIAN J. MC NAMARA	Reg No	32,789
SYBIL MELOY	Reg No	22,749
RICHARD C. PEET	Reg No	35,792
GEORGE E. QUILLIN	Reg No	32,792
ANDREW E. RAWLINS	Reg No	34,702
BERNHARD D. SAXE	Reg No.	28,665
CHARLES F. SCHILL	Reg No	27,590
RICHARD L. SCHWAAB	Reg No	25,479
MICHELE M. SIMKIN	Reg. No.	34,717
HAROLD C. WEGNER	Reg. No	25,258

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Richard C. Peet FOLEY & LARDNER Washington Harbour 3000 K Street, N.W., Suite 500 Washington, D.C. 20007-5109

Telephone: (202) 672-5483 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER DECLARE THAT all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of first inventor	Brian S. HOOKER	
Residence	Kennewick, WA	
 Citizenship	US	
Post Office Address	503 South Young Place Kennewick, WA 99336	
Inventor's signature	Drys Hande	
Date	1/23/03	
Name of second inventor	Daniel B. ANDERSON	
Residence	Pasco, WA	
Citizenship	US	
Post Office Address	1919 Road 80 Rasco, WA 99301	
Inventor's signature	Wal & Mu	
Date	1/27/03	
Name of third inventor	Johnway GAO	
Residence	Richland, WA	
Citizenship	US	
Post Office Address 506 Snyder Road Richland, WA 99352		
Inventor's signature		
Date	1/2/03	
Name of fourth inventor	Ziyu DAI	
Residence	Richland, WA	
 Citizenship	US	
Post Office Address	2835 Monarch Lane Richland, WA 99352	
Inventor's signature	122	
Date	1/23/03	

Name of fifth inventor	Nicholas J. LOMBARDO	
Residence	Richland, WA	
Citizenship	US	
Post Office Address	2801 Appaloosa Way <sup>CL</sup> Marin Richland, WA 99352	
Inventor's signature	Mudislas A. Hornbacks	
Date	1/22/03	



FORM PTO-1595 (monified)	U.S. DEPARTMENT OF COMMERCE
(O S RECORDATION FO	ORM COVER SHEET  Patent and *Trademark Office
PATEN	TS ONLY
To the Director of the United States Patent and Trademark Office	e: Please record the attached original documents or copies thereof.
1. Name of conveying party(ies):	2. Name and address of receiving party(ies):
Brian S. Hooker Daniel B. Anderson Johnway GAO Ziyu DAI Nicholas J. Lombardo	Battelle Memorial Institute 902 Battelle Blvd P. O. Box 999 Richland, WA 99352
Additional conveying party(ies) NO  3. Nature of conveyance:	
Additional Inventor	
Execution Date:	
January 22, 2003	Additional name(s) & address(es) attached? NO
<ol> <li>Application number(s) or patent number(s):</li> </ol>	
If this is being filed together with a new application, th	e execution date of the application is:
A. Patent Application Number(s):	B. Patent Number(s):
09/910,958	
Additional numb	 pers attached? NO
<ol><li>Name and address of party to whom correspondence concerning document should be mailed:</li></ol>	6. Total number of applications/patents involved: 1
Dishard C. Daat	7. Total fee (37 C.F.R. § 3.41): \$40.00
Richard C. Peet FOLEY & LARDNER Washington Harbour	X Check Enclosed
3000 K Street, N.W., Suite 500	Charge to deposit account
Washington, D.C. 20007-5143	8. Deposit account number: 19-0741
DO NOT US	E THIS SPACE
9. Statement and signature:  To the best of my knowledge and belief, the forego is a true copy of the original document. The Commissione fees which may be required in this matter to the above-ide	oing information is true and correct and any attached copy r is hereby authorized to charge any additional recordation ntified deposit account.

Richard C. Peet

Name of person signing

Total number of pages including cover sheet, attachments, and document: 3

### ASSIGNMENT

Nicholas J. Lombardo

To

Battelle Memorial Institute

WHEREAS, Nicholas J. Lombardo of Richland, County of Benton, State of Washington, together with Brian S. Hooker, Daniel B. Anderson, Johnway Gao, and Ziyu Dai, have made certain inventions in, Controlled Environment Agriculture Bioreactor for Heterologous Protein Production, described and claimed in Application Serial Number 09/910,958; and

WHEREAS, Battelle Memorial Institute, a corporation of Ohio, organized and existing under the laws of the State of Ohio, having a place of business in the City of Richland, Washington, is desirous of acquiring an interest in the said invention and in any patent or any patents to be obtained therefore;

NOW, THEREFORE, To All Whom It May Concern, be it known that, for and in consideration of the sum of One Dollar (\$1.00) each, and other good valuable considerations, the receipt of which is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the said Battelle Memorial Institute, the entire right, title, and interest in and to the invention shown, described, or claimed therein, and the full and exclusive right and title to the said application; and in and to any extensions, reissues, divisions, or renewals thereof; and we do hereby authorized and request the Commissioner of Patents or other proper Officer, to issue such Letters Patent, or any of them, to the said Battelle Memorial Institute, as the assignee of our entire right, title, and interest in and to the same for the sole use and benefit of the said Battelle Memorial Institute, and its successors or assigns.

And we further covenant and agree that we will, at the request and expense of the said Battelle Memorial Institute, execute such other and further assurances of title as may be necessary or proper to fully convey the interest herein sought to be conveyed; that we will, at the request and expense of the said Battelle Memorial Institute, execute such application papers as may be desired by the said Battelle Memorial Institute, for the filing of any divisional or renewal of the application herein conveyed, or for reissues or extensions, of any Letters Patent that may be granted upon said Statements, or other papers as desired by the said Battelle Memorial

Institute.

And we further assign unto the said Battelle Memorial Institute, the whole right, title, and interest to the invention disclosed in the application throughout all countries foreign to the United States, and do hereby authorize the said Battelle Memorial Institute to apply for patents therefore in its own name in countries where such procedure is proper and to claim the benefit of the International Convention and do agree to execute applications for the said invention in the several countries where it is necessary that the same be executed by the inventors, and to execute assignments of such applications and the assignee herein, as well as all other necessary papers.

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my seal at Richland, Washington, this 22 day of January, 2003.

Medista & Borbando Nicholas J. Lombardo

STATE OF WASHINGTON	)	
	)	SS
COUNTY OF BENTON	1	

This 22 day of January, 2003, before me personally came the abovenamed Nicholas J. Lombardo, who executed the foregoing instrument in my presence, and who acknowledged to me that he executed the same of his own free will for the purposes set forth therein.

> HOTARL PUBLIC SO PUB

Notary Public for Washington

My commission expires: 02/10/2006

[SEAL]



JANUARY 27, 2003

STEPHEN R. MAY

PTAS

Patent and Trademark Office ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Weshington, D.C. 20231

UNITED STATES DEPARTMENT OF COMMERCE

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INTELLECTUAL PROPERTY SERVICES P.O. BOX 999 902 BATTELLE BOULEVARD RICHLAND, WA 99352

UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/23/2003

REEL/FRAME: 013381/0411

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

LOMBARDO, NICHOLAS J.

DOC DATE: 01/22/2003

ASSIGNEE:

BATTELLE MEMORIAL INSTITUTE 902 BATTELLE BOULEVARD, P.O. BOX 999 INTELLECTUAL PROPERTY SERVICES K1-53

RICHLAND, WASHINGTON 99352

SERIAL NUMBER: 09910958

PATENT NUMBER:

FILING DATE: 07/24/2001

ISSUE DATE:

SHARON BROOKS, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

OPR/ASSIGNMENTS 1/27/03 11:50 PAGE 3/3 RightFAX JAN.23.2003 11:41AM IP SERVICES

NO.790 P.2

# 01/23/2003 700022964

	RM COVER SHEET U.S. DEPARTMENT OF COMMERCE U.S. Patent end Tradomark Office
Tab settings ⇒ ⇒ ▼ ▼ ▼ To the Honorable Commissioner of Patrate and Trademant.	: Plaase record the attached original documents or copy thereof.
Name of conveying party(ies):     Nicholas J. Lombardo	2. Name and address of receiving party(ies) Name: Battelle Memorial Institute Internal Address:
Additional name(s) of conveying party(se) ettached? Yes V No  3. Nature of conveyance:  V Assignment Merger  Security Agreement Change of Name  Other	Intellectual Property Services K1-53  Street Address: P.O. Box 989 902 Battelle Boulevard
Execution Date: 1/22/03  4. Application number(s) or patent number(s):	City: Richland State: WA Zip: 99352  Additional name(s) & address(ss) attached? Yes V No cation, the execution date of the application is:  B. Patent No.(s)
<ol><li>Name and address of party to whom correspondence concerning document should be mailed:</li></ol>	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 3.41)
Street Address: P.O. Box 999  902 Battelle Boulevard  City: Richland State: WA Zip: 99352	8. Deposit account number: 02-1276
9. Signature.	THIS SPACE
Stephen R. May  Name of Person Signing  Total number of pages including cover s	Signature 23 Jan 2003 Dete



• RP

JANUARY 10, 2002 FOLEY & LARDNER

RICHARD C. PEET WASHINGTON HARBOUR

PTAS

Under Secretary of Commerce For Intellectual Property and Director of the United States Patent and Trademark Office Washington, DC 20231 www.uspto.gov



UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE. YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/30/2001

3000 K STREET, N.W., SUITE 500 WASHINGTON, D.C. 20007-5109

REEL/FRAME: 012290/0464 NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HOOKER, BEIAN S.

DOC DATE: 09/17/2001

ASSIGNOR:

ANDERSON, DANIEL B.

DOC DATE: 09/18/2001

ASSIGNOR:

GAG, JOHNWAY

DOC DATE: 09/17/2001

ASSIGNOR

DAI, ZIYU

DOC DATE: 09/14/2001

ASSIGNEE:

BATTELLE MEMORIAL INSTITUTE 902 BATTELLE BLVD P.C. BOX 999 RICHLAND, WASHINGTON 99352

SERIAL NUMBER: 09910958

PATENT NUMBER:

FILING DATE: 07/24/2001

ISSUE DATE:

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012290/0464 PAGE 2

ALLYSON PURNELL, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

RECORE

11-02-2001

Atty. Dkt. No. 059440-0138 U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

101891817

1. Name of conveying party(ies):

Brian S. Hooker, Sept. 17, 2001 Daniel B. Anderson, Sept. 18, 2001 Johnway GAO, Sept. 17, 2001 Rept. 14, 2001

17-30-0

NO

20007-5109

3. Nature of conveyance:

ASSIGNMENT

Execution Date:

Sept. 14, 17 and Sept. 18, 2001

2. Name and address of receiving party(ies):

Battelle Memorial Institute 902 Battelle Blvd P. O. Box 999 Richland, Washington 99352

Additional name(s) & address(es) attached? NO

4. Application number(s) or patent number(s):

If this is being filed together with a new application, the execution date of the application is:

A. Patent Application Number(s):

09/910,958

B. Patent Number(s):

Additional numbers attached? NO

5. Name and address of party to whom correspondence concerning document should be mailed:

3000 K Street, N.W., Suite 500

40.00

6. Total number of applications/patents involved: 1

\$40.00

X Check Enclosed

Charge to deposit account

7. Total fee (37 C.F.R. § 3.41);

1.9-0741 Deposit account number:

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9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. The Commissioner is hereby authorized to charge any additional recordation fees which may be required in this matter to the above-identified deposit account.

Richard C. Peet

Richard C. Peet

FOLEY & LARDNER Washington Harbour

Washington, D.C.

October 30, 2001

Name of person signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: 3

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01 FC:581

#### ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

name and address of Battelle Memorial Institute

902 Battellle Boulevard, P.O. Box 999

assignee

Richland, Washington 99352

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in

## CONTROLLED ENVIRONMENT AGRICULTURE BIOREACTOR FOR HETEROLOGOUS PROTEIN PRODUCTION

check one	executed concurrently herewith				
	□ executed on				
	Serial No.	09/910,958	Filed	July 24,	2001

said application for United States Letters Patent, including all divisional, renewal, substitute. continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be of said inventions,

and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

The undersigned hereby grant the firm of FOLEY & LARDNER the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

NAMES AND SIGNATURES OF INVENTORS					
Name: Brian S. HOOKER	Signature: Francisco	Date:	9/17/2001		
Name: Daniel B. ANDERSON	Signature:	Date:	9/18/2001		
Name: Johnway GAO	Signature:	Date:	9/17/2001		
Name: Ziyu DAI	Signature: Original End	Date:	4-14-01		
NAMES AND SIGNATURES OF WITNESSES					
Name: Répleceu B. Ruft	Signature: Kebecer & Kupp	Date:	9/17/01		
Name: Rebecca B. Ruff	Signature: Rebecca B. Rupp	Date:	9/18/01		
Name: Bebecca B. Rupp	Signature: Kebecch Er Rugge	Date:	9/17/01		
Name: Rebecca B. Rupp	Signature: Kebeece & Rupp	Date:	9/14/01		

Note: Prima facie evidence of execution may optionally be obtained by execution of this document before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.

IPT-407:4/90(1)(modified)